



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/064,471	07/17/2002	Jeffrey Rahn	107153	7900
27074	7590	10/17/2005		
OLIFF & BERRIDGE, PLC. P.O. BOX 19928 ALEXANDRIA, VA 22320				
			EXAMINER HO, ALLEN C	
			ART UNIT 2882	PAPER NUMBER

DATE MAILED: 10/17/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

H.D

Office Action Summary	Application No. 10/064,471	Applicant(s) RAHN, JEFFREY	
	Examiner Allen C. Ho	Art Unit 2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 4-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:
 - (1) Paragraph [0046], line 2, "651-652" should be replaced by --670, 671--;
 - (2) Paragraph [0046], line 4, "651" should be replaced by --670--; and
 - (3) Paragraph [0046], line 5, "652" should be replaced by --671--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1-3 and 18 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 1-3 and 18 recite "a sensor that provides an electronic signal that represents a multi-color image or an x-ray image to the two-dimensional array of pixels". This feature is not enabled by applicant's disclosure. The specification disclosed an input device that includes a pixel device (660) which further includes a sensor (653) such as a photodiode (paragraph [0035]). The input device comprises a two-dimensional pixel array, each pixel comprises a pixel

Art Unit: 2882

device to detect the image at that location (paragraph [0036]). Since a capacitor stores a single charge, it would be impossible for a single sensor to provide an electronic signal that represents a multi-color image or an x-ray image to the two-dimensional array of pixels. A complete image can only be provided by a two-dimensional detector that comprises a two-dimensional arrays of sensors.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Merrill *et al.* (U. S. Patent No. 6,606,120 B1).

With regard to claim 1, Merrill *et al.* disclosed an imaging system (Fig. 15), comprising: an input device (32) that includes a pixel device (100-5) which further includes a sensor (82) that provides an electronic signal, the input device provides a multi-color image to the two-dimensional array of pixels, at least one transistor (112-1, 112-4) connected to the sensor; a first capacitor (110-1) that is selectively connected to the sensor; a second capacitor (110-4) that is selectively connected to the sensor; and a controller that selectively (XFR1, XFR 2) stores the entirety of the electronic signal provided by the sensor in either the first capacitor or the second capacitor.

However, Merrill *et al.* failed to teach that the imaging system further comprises a two-dimensional array of pixels, and the electronic signal representing an image is provided to the two-dimensional array of pixels.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an output device (*e. g.*, a display) that comprises a two-dimensional array of pixels, since a person would be motivated to view the image detected by the imaging system.

With regard to claim 2, Merrill *et al.* disclosed the imaging system according to claim 1, the pixel device further comprising: a plurality of transistors (**112-1**, **112-4**) and at least two control signals, one (XFR1) of the at least two control signals controlling one of the plurality of transistors so that the electronic signal is stored in the first capacitor, and the other one (XFR2) of the at least two control signals controlling another one of the plurality of transistors so that the electronic signal is stored in the second capacitor.

With regard to claim 3, Merrill *et al.* disclosed the imaging system of claim 2, wherein the first capacitor is independently active for greater than 10 microseconds. This claim fails to set forth additional structural limitation. Accordingly, it is rejected with claim 2.

With regard to claim 18, Merrill *et al.* disclosed an imaging system, comprising: an input device (**32**) that includes a pixel device (**100-5**) which further includes a sensor (**82**) that provides an electronic signal, the input device provides a multi-color image to the two-dimensional array of pixels, at least one transistor (**112-1**, **112-4**) connected to the sensor; a first capacitor (**110-1**); a second capacitor (**110-4**); and a controller that selectively (XFR1, XFR 2)

Art Unit: 2882

stores the entirety of the electronic signal that represents the image in either the first capacitor or stores the entirety of the electronic signal that represents the image in the second capacitor.

However, Merrill *et al.* failed to teach that the imaging system further comprises a two-dimensional array of pixels, and the electronic signal representing an image is provided to the two-dimensional array of pixels.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to provide an output device (*e. g.*, a display) that comprises a two-dimensional array of pixels, since a person would be motivated to view the image detected by the imaging system.

Note: the above rejection is made in light of the specification and as understood by the examiner.

Response to Arguments

6. Applicant's arguments filed 28 September 2005 have been fully considered but they are not persuasive.

The applicant argues that Merrill *et al.* failed to disclose an electronic signal that represents a multi-color image and a controller that selectively stores the entirety of the electronic signal provided by the sensor in either the first capacitor or the second capacitor. The examiner respectfully disagrees with this argument. As noted in the rejection under 35 U.S.C. 112, first paragraph, a single sensor cannot provide an electronic signal that represents an entire image. The only way an entire image could be formed is by combining the electronic signals

Art Unit: 2882

from a two-dimensional array of sensors. Clearly, Merrill *et al.* disclosed an input device that provides an electronic signal that represents a multi-color image.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen C. Ho
Primary Examiner
Art Unit 2882

13 October 2005